

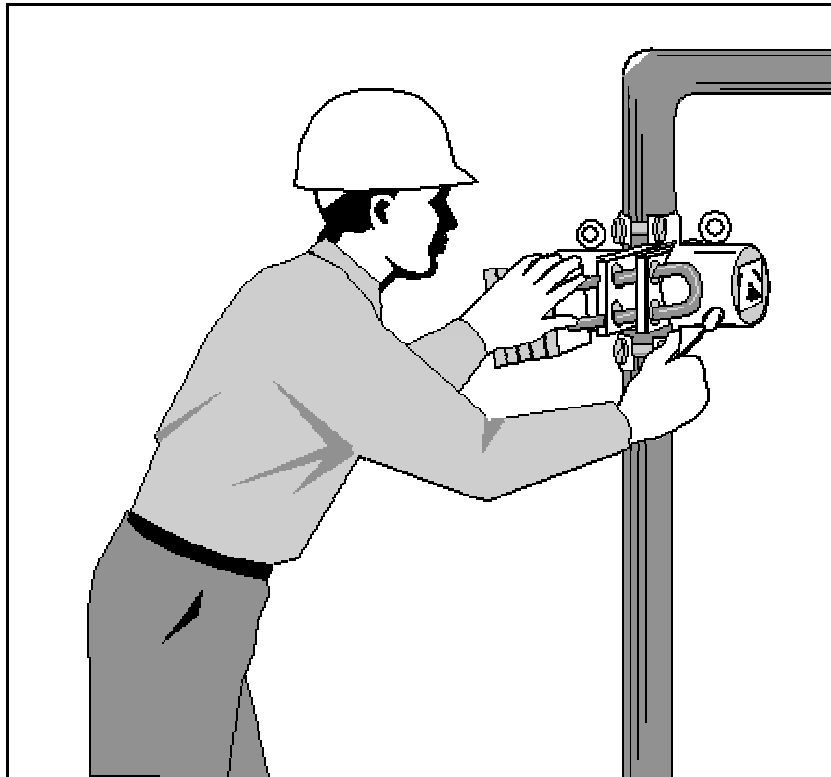
13B. Leak Tests

Regulations: 180 NAC 1-006, 180 NAC 1-011, 180 NAC 4-021 and 180 NAC 4-048

Criteria: *The Agency requires licensee to perform a leak test to determine whether or not there is any leakage from the radioactive source in the device. Records of the test results must be maintained.*

The leak test will be performed at intervals approved by the Agency, an Agreement State or by the NRC and specified in the Sealed Source and Device Registration Certificate. The measurement of the leak-test sample is a quantitative analysis requiring that instrumentation used to analyze the sample be capable of detecting 185 becquerels (0.005 microcurie) of radioactivity.

Manufacturers, distributors, consultants, and other organizations may be authorized by the Agency, an Agreement State or the NRC to perform the entire leak test sequence for other licensees or provide leak test kits to licensees. In the latter case, the licensee is expected to take the leak test sample according to the fixed gauge manufacturer's and the kit supplier's instructions and return it to the kit supplier for evaluation and reporting results. Leak test samples should be collected at the most accessible area where contamination would accumulate if the sealed source were leaking. See Figure 8. Licensees may also be authorized to conduct the entire leak test sequence themselves. Appendix O contains information to support a request to perform leak testing and sample analysis.



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FIGURE 8 Leak Test Sample. A leak test sample is collected according to the gauge manufacturer's and the leak test kit supplier's instructions.

Options for leak testing are:

- (1) Manufacturers, consultants, and other organizations may be authorized by the Agency, the U.S. Nuclear Regulatory Commission or other Agreement State.
- (2) Use a commercial leak test kit. The licensee is expected to take the leak test sample according to the gauge manufacturer's and the kit supplier's instructions and return it to the kit supplier for evaluation and reporting results.
- (3) Licensees may also be authorized to conduct the entire leak test sequence themselves.

Response from Applicant: Provide one of the following:

- A statement: "Leak tests will be performed at intervals approved by the Agency, an Agreement State or by the NRC and specified in the Sealed Source and Device Registration Certificate and records maintained and records maintained."
- AND**
- A statement: "Leak tests will be performed by an organization authorized by the Agency, an Agreement State or the U.S. Nuclear Regulatory Commission to provide leak testing services for other licensees."

OR

- A statement: "Leak test kit will be supplied by an organization authorized by the Agency, an Agreement State or U.S. Nuclear Regulatory Commission to provide leak test kits to other licensees and according to the kit supplier's instructions. Records for leak test results will be maintained."

Provide the name of licensee and license # performing maintenance:

And/Or

Supplier of leak test kit: _____

Model number of kit _____

Suppliers Address _____

OR

- Provide in house leak testing procedure for Agency approval.

Note: Appendix O in Regulatory Guide 3.13 "Radioactive Material Guidance for Fixed Gauge Licenses," indicates the criteria and procedure for in house leak testing. Instrument used must be identified.